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FARO

UNDERGROUND

- Kilborn
1987

6.0 FARO UNDERGROUND MINING

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6.1 GENERAL

Southwest of the ore being mined in the Faro Open pit is a zone of high grade lead zinc ore which will be mined by underground methods.

Mining practices at the Faro Underground will be influenced by two major factors:

- a) The mineralized tabular zones dip at 15 to 25 degrees;
- b) The rock comprising the footwall and the hanging wall is mineralized and the grades similar to the material being mined within the open pit.

The dip of the zones is well below the angle of repose of broken rock and gravity cannot be used to move broken ore. The dip is too steep to allow the use of rubber tired equipment within the stopes.

The competent rocks, however, allow the use of a mining method requiring relatively large areas of exposed, unsupported back.

Open stoping methods will be used. Open stopes will be mined up dip and pillars left between stopes. These pillars will be partially removed during final mining retreat to give a final overall extraction of 75 percent.

The thickness which will be mined are normally greater than 3 metres. A minimum mining height of 2.1 metres has been used.

Mine water inflows are not expected to be a major problem. The wet areas encountered within the Faro open pit appear to be associated with faults and most of the rocks have low permeability.

The mine will be operated on a two - ten hour shift, five day per week basis. Production per operating day will be 2000 tonnes. Access will be provided by a decline. Hydraulic jumbos and trackless loaders and trucks will be used to drive the decline and the access drifts to the stoping areas. Stope mining operations will be conducted with short hole, portable drills and electric slushers.

6.2 ORE RESERVES

The ore zone shown on Figure 6.2-1 is an extension of the orebody being mined by the Faro open pit. The reserves are based on surface drill holes as indicated in the figure. A geological reserve was calculated by the polygon method using the following parameters:

- a) Minimum insitu grade 9 percent Pb + Zn.
- b) Minimum mining height 2.1 metres.
- c) Maximum radius of influence 46 metres.
- d) Minimum pillar between underground reserves and final open pit wall is 15 metres.

These reserves are considered to be in the probable category.

Geological reserves are given in table 6.2-1.

Mining reserves are calculated from geological reserves on the following parameters:

- a) Dilution - 10 percent at zero grade.
- b) Mining Recovery - 75 percent of in-place reserves.

Mining Reserves are given in table 6.2-1.

Table 6.2-1
Geological Reserves

<u>Ore Type</u>	<u>Lead Percent</u>	<u>Zinc Percent</u>	<u>Silver gm/tonne</u>	<u>Quantity tonnes</u>
2A	1.98	3.88	13.86	58,000
2BG	5.09	7.69	67.51	2,288,000
<u>2H</u>	<u>5.21</u>	<u>9.26</u>	<u>82.17</u>	<u>264,000</u>
<u>TOTAL</u>	<u>5.04</u>	<u>7.76</u>	<u>67.90</u>	<u>2,610,000</u>
<u>Mining Reserve</u>				
<u>TOTAL</u>	4.59	7.00	61.29	2,014,000

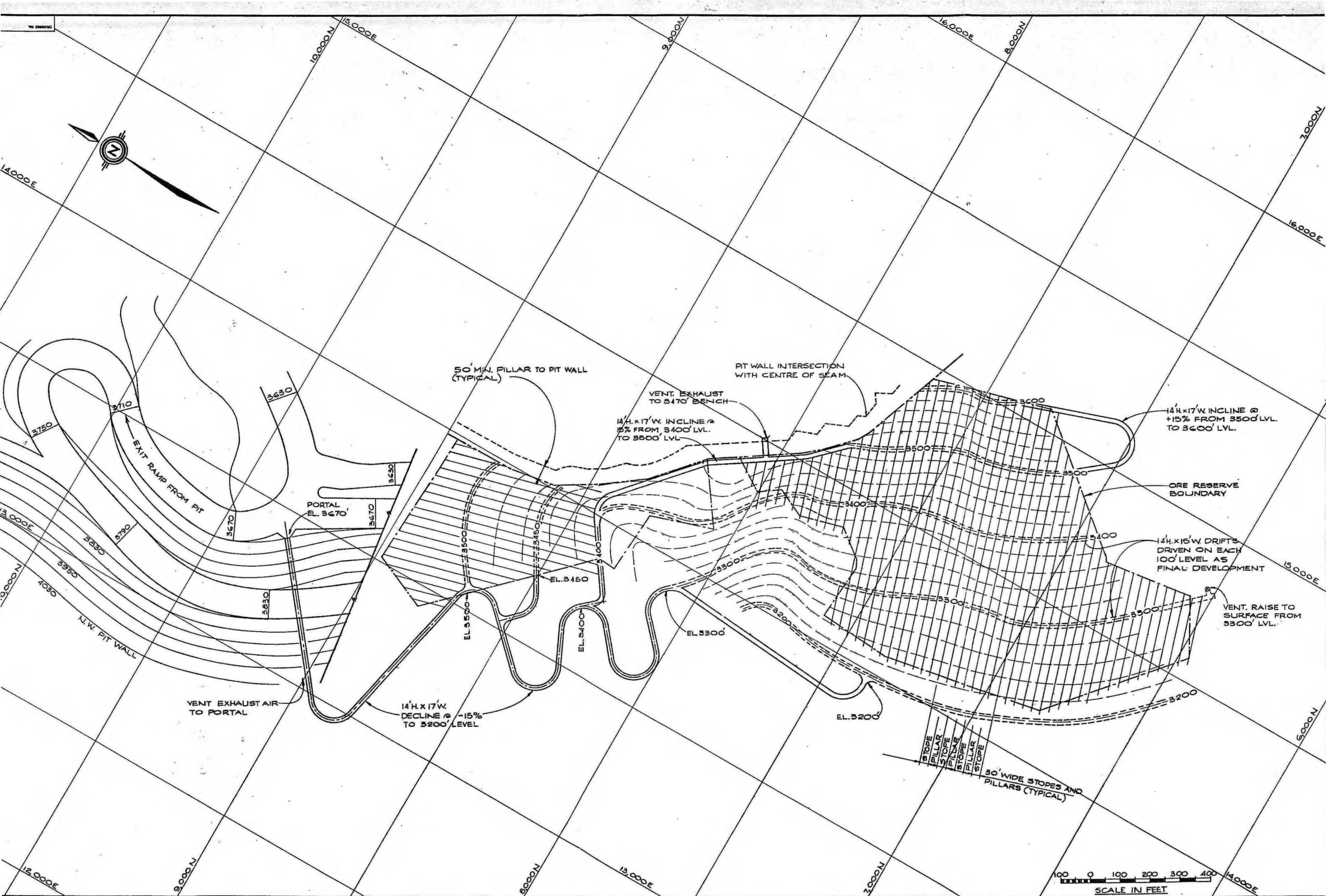
6.3 MAJOR DEVELOPMENT

Major development prior to the start of production is shown on Figure 6.3-1 and comprises 3 main areas:

- Main access decline;
- Mining levels;
- Ventilation Raise.

The main access decline will be collared on the west wall of the existing open pit at 3670 ft elevation. The grade of the decline will be 15 percent. Dimensions of the decline will be 4.3 metres high by 5.2 metres wide. This decline will be positioned to permit intersection of the bottom of the ore zone at 30 metres vertical intervals. Prior to start of production 1219 metres of decline will be driven. Two main level drifts will be driven as part of the preproduction development at 3300 and 3400 ft elevations. This major drifting will amount to 1128 metres of which 579 metres will be at the 3400 ft elevation. The remaining 550 metres of preproduction development will be at the 3200 ft elevation. These drifts will have the same dimensions as the decline.

The main ventilation downcast raise will be driven from the end of the 3300 ft level to surface in a distance of 245 metres. This raise will be a 2.4 metre diameter bored raise fitted with an emergency escape manway.



NO. NO.		REFERENCE DRAWINGS		CLIENT: CURRAGH RESOURCES		TITLE: FARO AREA DEPOSITS		S.O.M. No.	
CLIENT: CURRAGH RESOURCES		PROJECT No. 3509		DIVISION No. 19		DRAWING NUMBER: FIG. 6.3-2		REV. A	
SCALE: 1" = 100'		DATE: MAR 07		LOCATION: FARO, YUKON.		KILBORN		FARO DEPOSIT UNDERGROUND MINE FINAL DEVELOPMENT	
DRAWN BY: R.A.H.		CHECKED BY: J.B.F.		ISSUED FOR TECHNICAL REVIEW MAR 07		APPROVED BY: J.B.F.			
REVISIONS		REVISIONS		REVISIONS		REVISIONS		REVISIONS	

Total major development for the life of the mine is shown on Figure 6.3-2 and includes further drifting on the 3200 ft., 3400 ft. and 3500 ft. elevations. This additional ongoing development amounts to 1433 metres in length.

6.4 STOPE DEVELOPMENT

Stope development will be similar for both stopes in thick ore zones and stopes in thinner ore zones. This development for a stope, which can be seen on Figure 6.4-1, includes:

- slusher station with access raise
- drawpoint
- stope raise

Stope development will be positioned in ore to minimize the excavation of waste.

6.5 STOPPING METHOD

The stopping method which will be used is up-dip open-stopping with air leg pneumatic drills and electric powered slusher/scrapers for ore removal to the stope drawpoint. Typical stopes are shown on Figure 6.4-1.

The procedure will be as follows:

- a) A slot raise will be excavated from the top of the drawpoint drift to the top of the ore.
- b) An access raise from the main level drift to the slusher hoist station and the slusher hoist station will be excavated.
- c) The slusher hoist and scraper will be installed.
- d) A 2.1 metre slot raise will be driven along the back of the stope from the top of the slot raise to the level above.
- e) The ore body will be mined up dip from the slot raise to the crown pillar. Drill holes will be drilled up dip as shown on Figure 6.4-1. Hole length will be 10 feet. Initial mining height will be 3 metres or ore thickness if less than 3 metres. The stope back will be rockbolted as required.

- f) If the ore is over 3 metres in thickness successive lifts of up to 3 metres will be mined from the stope.
- g) Broken ore will be removed to the drawpoint with the scraper as required for mining.
- h) After all ore is broken any remaining broken ore within the stope will be slushered to the drawpoint.
- i) After mining of two primary stopes, the pillar will be partially mined to leave square 9.1 metres by 9.1 metres pillars and give a 75 percent mining extraction.

A total of 10 stopes operating on a two shift per day schedule will be active at any one time.

6.6 LOADING AND HAULAGE

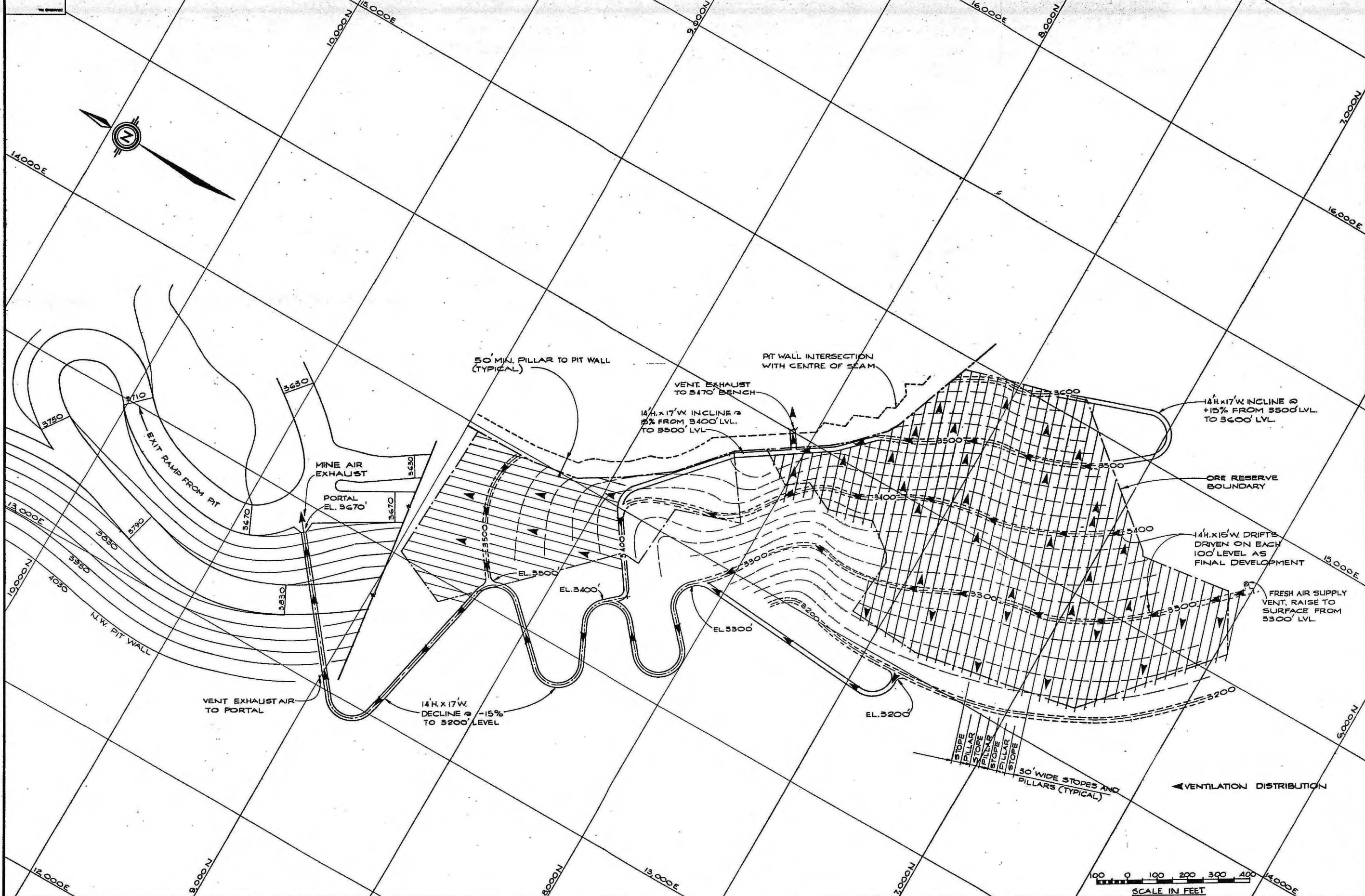
Ore will be removed from the stope drawpoints with 4.6 m³ LHDs and 3 35-ton trucks will be required to handle the ore produced in stoping and the material from ongoing development.

The ore will be hauled to a stockpile area immediately outside the mine portal from where it will be loaded into open pit haulage trucks and hauled to the crusher as needed.

6.7 VENTILATION AND MINE AIR HEATING

The main ventilation system, as shown on Figure 6.7.3-1, will be down the main ventilation raise from surface to the 3300 ft level and then upwards and downwards through the stoping blocks and hence exiting the mine through the decline system and exhaust drifts into the open pit.

Ventilation requirements are controlled primarily by the amount of diesel equipment operating within the mine. An allowance of 300,000 cfm is considered adequate for this operation.



CLIENT: CURRAGH RESOURCES LOCATION: FARO, YUKON. KILBORN		TITLE: FARO AREA DEPOSITS FARO DEPOSIT UNDERGROUND MINE VENTILATION DISTRIBUTION		PROJECT NO. 3509 DIVISION NO. 19 DRAWING NUMBER REV. FIG. 6.73-1 A
SECTION: SCALE: 1" = 100' DESIGNED BY: J.B.F. MARST DRAWN BY: R.A.H. MARST CHECKED BY: APPROVED BY: J.B.F.		DATE: MAR 87 ISSUED FOR TECHNICAL REVIEW MAR 87		CLIENT: CURRAGH RESOURCES PROJECT NO. 3509 DIVISION NO. 19 DRAWING NUMBER REV. FIG. 6.73-1 A
CLIENT: CURRAGH RESOURCES PROJECT NO. 3509 DIVISION NO. 19 DRAWING NUMBER REV. FIG. 6.73-1 A	CLIENT: CURRAGH RESOURCES PROJECT NO. 3509 DIVISION NO. 19 DRAWING NUMBER REV. FIG. 6.73-1 A	CLIENT: CURRAGH RESOURCES PROJECT NO. 3509 DIVISION NO. 19 DRAWING NUMBER REV. FIG. 6.73-1 A	CLIENT: CURRAGH RESOURCES PROJECT NO. 3509 DIVISION NO. 19 DRAWING NUMBER REV. FIG. 6.73-1 A	CLIENT: CURRAGH RESOURCES PROJECT NO. 3509 DIVISION NO. 19 DRAWING NUMBER REV. FIG. 6.73-1 A

The main ventilation fans will be located at the top of the ventilation raise and will pressurize the mine workings. Within the mine, air flows to the various working areas will be controlled with auxiliary fans and bulkheads.

Mine air will require heating during sub zero weather to ensure that waterlines and drainage systems, within the mine do not freeze. Direct-fire propane heaters will be provided for this service. A propane storage system will be required near the ventilation raise.

6.8 UNDERGROUND SERVICES

Temporary underground services will be carried into the mine through the decline and level drifts until the workings are connected to the ventilation raise. When the ventilation raise is complete, mine services will be brought down the ventilation raise to service the mine. Services which will be provided include electrical power, compressed air and water. The mine has been designed with the majority of the energy requirements being for electrical and diesel powered equipment. Compressed air usage has been minimized.

Mine water drainage will be handled in sumps located at the junctions of the levels and the decline. The level drifts will be driven at a positive one percent grade to provide drainage. Unsettled water will be pumped to surface for disposal with the water from the open pit. Mine water discharge lines will be located in the decline.

Mine communications will be provided by a mine mobile radio system operating in conjunction with coaxial antenna located in the main levels and declines. A stench warning system will be provided in the mine ventilation system and compressed air system for emergencies.

Mobile equipment will be taken to the main surface shop for major maintenance. Routine maintenance will be undertaken in small shop areas within the mine workings.

6.9 RELATED SURFACE FACILITIES

The surface facilities required for the underground mine will be minimal.

Office and changehouse facilities are presently in existence and no increase in capacities will be required.

Maintenance shop facilities are available and equipped for the open pit equipment. These facilities will be used to maintain the underground equipment.

A compressor plant to provide compressed air to the mine at 100 psi will be required. Compressed air requirements are estimated to be 3500 cfm. To permit maintenance and to cover peaks 4500 cfm will be installed. A compressor house of 12.2 metres by 9.1 metres will be required to house this equipment.

Ore will be stockpiled in open piles near the decline collar. This material will be rehandled with open pit equipment.

6.10 MINE PERSONNEL

The total mine compliment is:

Supervision & Technical	14
Operating Labour	72
Maintenance Labour	<u>14</u>
TOTAL	<u>100</u>

The detailed listing are shown on Tables:

6.10-1

6.10-2

6.10-3

Table 6.10-1Supervision & Technical

Underground Superintendent	1
U/G General Foreman	1
Shift Foreman	4
Maintenance Foreman	1
Sr. Mine Engineer	1
Mine Engineer	1
Mine Technician	1
Surveyor	1
Survey Helper	1
Geologist	1
Geological Technician	1
TOTAL	<u>14</u>

Table 6.10-2Underground Operating Labour

Stope Miner	40
Development Miner	6
LHD Operator	4
Truck Driver	6
Timberman	2
Timber Helper	2
Utility	6
U/G Labour	<u>6</u>
TOTAL	<u>72</u>

Table 6.10-3Maintenance Labour

Lead Mechanic	2
Lead Electrician	1
Mechanic	3
Electrician	2
Drill Doctor	1
Oiler	1
Maintenance Helper	<u>4</u>
TOTAL	<u>14</u>

6.11 MAJOR MINE EQUIPMENT

Major underground equipment for the mine includes:

<u>Item</u>	<u>Numbers</u>
2 Boom Hydraulic Jumbo	2
Airleg and Stoper Drills	50
LHD Units - 4.6 cu.m. Capacity	4
Trucks - 35 ton Capacity	3
Slusher Hoists c/w Scrapers	
25 Horsepower Electric	12
Service Vehicles	2
Mine Dewatering Pumps	
Various Horsepowers & Heads	5
Auxiliary Fans	15
Pumps	Lot

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
36		2BG	539.0	553.0	14.0	4.03	4.06	7.07	0.0	56.37	228.74	398.76	0.0	
37														
38	71-03	2A	588.0	593.0	5.0	3.19	2.40	2.70		15.95	38.28	43.07	0.0	
39	71-03	2F	593.0	598.0	5.0	4.33	4.50	5.80		21.65	97.42	125.57	0.0	
40														
41	71-04	2E	524.0	529.0	5.0	4.33	3.20	5.60		21.65	69.28	121.24	0.0	
42		2E	529.0	534.0	5.0	4.33	3.90	5.80		21.65	84.44	125.57	0.0	
43														
44		2BG	524.0	534.0	10.0	4.33	3.55	5.70	0.0	43.30	153.72	246.81	0.0	
45														
46	71-05	2F	517.5	522.5	5.0	4.05	5.75	6.11	71.60	20.25	116.52	123.73	1449.90	
47		2F	522.5	527.5	5.0	4.61	5.18	5.49	83.60	23.05	119.40	126.54	1926.98	
48														
49		2BG	517.5	527.5	10.0	4.33	5.45	5.78	77.99	43.30	235.92	250.27	3376.88	
50														
51	72004	2J	509.0	511.5	2.5	3.79	5.04	11.90	77.80	9.47	47.75	112.75	737.15	
52		2C	511.5	516.5	5.0	2.81	1.69	3.67	34.00	14.05	23.74	51.56	477.70	
53		2B	516.5	521.0	4.5	2.69	1.41	4.73	24.60	12.11	17.07	57.26	297.78	
54		2B	521.0	526.1	5.1	2.85	3.53	7.73	60.90	14.54	51.31	112.36	885.18	
55														
56		2BG	509.0	526.1	17.1	2.93	2.79	6.66	47.80	50.17	139.88	333.93	2397.82	
57														
58	72-13	2E	582.0	587.0	5.0	4.07	8.53	6.63	80.40	20.35	173.59	134.92	1636.14	
59		2F	587.0	592.0	5.0	4.12	5.75	9.60	58.30	20.60	118.45	197.76	1200.98	
60		2B	592.0	597.0	5.0	3.32	4.87	6.96	56.80	16.60	80.84	115.54	942.88	
61		2F	597.0	602.0	5.0	4.56	6.18	6.55		22.80	140.90	149.34		
62		2F	602.0	607.0	5.0	4.88	6.28	6.53	87.40	24.40	153.23	159.33	2132.56	
63		2F	607.0	612.0	5.0	4.11	4.97	7.12	74.10	20.55	102.13	146.32	1522.76	
64		2B	612.0	617.0	5.0	3.30	5.30	5.88	71.20	16.50	87.45	97.02	1174.80	
65		2F	617.0	622.0	5.0	3.98	6.95	9.55	91.20	19.90	138.31	190.05	1814.88	
66		2B	622.0	627.0	5.0	3.04	11.39	2.83	192.80	15.20	173.13	43.02	2930.56	
67														
68		2BG	582.0	627.0	45.0	3.93	6.60	6.97	86.67	176.90	1168.03	1233.29	13355.56	
69														
70	74-17	2D	484.0	489.0	5.0	3.43	5.49	15.00	32.90	17.15	94.15	257.25	564.24	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
71		2E	489.0	494.0	5.0	4.55	6.48	7.90	72.50	22.75	147.42	179.72	1649.38	
72		2Q	494.0	499.0	5.0	3.54	3.63	4.52	51.40	17.70	64.25	80.00	909.78	
73		2Q	499.0	504.0	5.0	2.98	.68	.94	10.00	14.90	10.13	14.01	149.00	
74		2Q	504.0	509.0	5.0	3.51	3.91	6.13	55.50	17.55	68.62	107.58	974.02	
75		2G	509.0	514.0	5.0	4.56	5.15	6.52	78.80	22.80	117.42	148.66	1796.64	
76		2G	514.0	519.0	5.0	4.58	5.76	6.43	89.00	22.90	131.90	147.25	2038.10	
77		2E	519.0	524.0	5.0	4.71	6.17	7.05	105.00	23.55	145.30	166.03	2472.75	
78		2E	524.0	529.0	5.0	4.30	5.02	6.26	80.30	21.50	107.93	134.59	1726.45	
79		----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
80		2BG	484.0	529.0	45.0	4.02	4.91	6.83	67.92	180.80	887.13	1235.09	12280.35	
81		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
82	75-11	2H	505.0	510.0	5.0	3.50	4.02	5.78	35.00	17.50	70.35	101.15	612.50	
83		2H	515.0	520.0	5.0	3.81	5.19	7.89	55.49	19.05	98.87	150.30	1057.08	
84		2H	520.0	525.0	5.0	5.21	6.84	9.59	41.79	26.05	178.18	249.82	1088.63	
85		2H	525.0	530.0	5.0	3.89	6.61	9.69	68.59	19.45	128.56	188.47	1334.08	
86		2H	530.0	535.0	5.0	3.79	5.50	7.58	68.59	18.95	104.22	143.64	1299.78	
87		2H	550.0	555.0	5.0	4.17	4.98	7.17	58.29	20.85	103.83	149.49	1215.35	
88		2H	560.0	565.0	5.0	3.60	4.09	7.09	76.09	18.00	73.62	127.62	1369.62	
89		----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
90		2H	495.0	565.0	35.0	4.00	5.42	7.94	57.04	139.85	757.64	1110.50	7977.04	
91		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
92	75-11	2F	495.0	500.0	5.0	3.87	3.60	6.29	33.60	19.35	69.66	121.71	650.16	
93		2F	500.0	505.0	5.0	4.30	5.50	7.08	41.79	21.50	118.25	152.22	898.48	
94		2E	510.0	515.0	5.0	2.73	.10	.08	4.79	13.65	1.36	1.09	65.38	
95		2F	535.0	540.0	5.0	4.25	5.58	8.98	61.70	21.25	118.58	190.83	1311.12	
96		2F	540.0	545.0	5.0	4.62	4.90	8.10	54.89	23.10	113.19	187.11	1267.96	
97		2F	545.0	550.0	5.0	4.00	4.96	7.78	60.39	20.00	99.20	155.60	1207.80	
98		2D	555.0	560.0	5.0	3.31	2.02	5.23	35.00	16.55	33.43	86.56	579.25	
99		----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
100		2BG	495.0	565.0	35.0	3.87	4.09	6.61	44.17	135.40	553.67	895.12	5980.16	
101		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
102	75456-15	2H	729.5	731.0	1.5	4.02	6.11	9.46	91.90	6.03	36.84	57.04	554.16	
103	75456-15	2F	722.5	729.5	7.0	4.33	4.88	7.99	48.00	30.31	147.91	242.18	1454.88	
104		2E	731.0	736.5	5.5	4.33	5.09	7.05	54.70	23.82	121.22	167.90	1302.68	
105		2F	736.5	742.5	6.0	4.33	4.58	8.19	56.20	25.81	118.20	211.36	1450.34	

529.2

2.8 4.52 6.52 9.65 43.99

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
141		2H	542.7	538.0	7.8	4.46	4.54	7.65	42.50	35.3	229.9	340.2	1551.2	
142	76-10	2D	537.0	538.0	1.0	4.46	4.54	7.65	42.50	4.46	20.25	34.12	189.55	where is this # from?
143														
144	76-11	2E	516.0	521.0	5.0	4.90	4.90	7.90	56.90	24.50	120.05	193.55	1394.05	
145		2E	521.0	526.0	5.0	3.73	4.60	6.58	65.80	18.65	85.79	122.72	1227.17	
146		Q	526.0	531.0	5.0	2.90	5.33	2.20	90.90	14.50	77.28	31.90	1318.05	
147		2J	531.0	536.0	5.0	3.76	11.92	13.50	310.00	18.80	224.10	253.80	5828.00	
148		2J	536.0	541.0	5.0	4.00	12.30	16.60	384.00	20.00	246.00	332.00	7680.00	
149		2J	541.0	544.0	3.0	3.26	6.85	8.88	132.40	9.78	66.99	86.85	1294.87	
150														
151		2BG	516.0	544.0	28.0	3.79	7.72	9.61	176.43	106.23	820.21	1020.81	18742.14	
152														
153	77-16	2H	497.5	501.5	4.0	4.31	6.81	8.35	99.70	17.24	117.40	143.95	1718.83	
154	77-16	2F	450.0	455.0	5.0	4.56	5.73	7.21	76.60	22.80	130.64	164.39	1746.48	
155		2F	455.0	460.0	5.0	4.59	5.29	6.44	65.10	22.95	121.41	147.80	1494.04	
156		2D	460.0	463.5	3.5	3.51	3.71	4.97	53.60	12.29	45.58	61.06	658.48	
157		2D	463.5	467.0	3.5	3.36	2.36	4.23	35.00	11.76	27.75	49.74	411.60	
158		2G	467.0	472.0	5.0	4.77	5.87	6.22	82.50	23.85	140.00	148.35	1967.62	
159		2G	472.0	477.0	5.0	4.51	4.40	4.90	65.20	22.55	99.22	110.50	1470.26	
160		2G	477.0	482.0	5.0	4.55	5.76	6.59	82.40	22.75	131.04	149.92	1874.60	
161		2G	482.0	487.0	5.0	4.67	5.44	6.98	80.70	23.35	127.02	162.98	1884.35	
162		2G	487.0	492.0	5.0	4.56	5.60	5.94	90.10	22.80	127.68	135.43	2054.28	
163		2G	492.0	497.5	5.5	4.60	5.89	6.44	85.10	25.30	149.02	162.93	2153.03	
164														
165		2BG	450.0	501.5	47.5	3.28	4.22	8.01	52.88	210.4	1099.4	1293.1	15714.7	
166														
167	82F-10	2H	541.9	543.7	1.8	4.08	5.85	8.51	110.11	7.34	42.96	62.50	808.65	
168	82F-10	2E	530.5	533.4	2.9	4.03	4.82	6.77	79.63	11.69	56.33	79.12	930.64	
169		2E	533.4	536.6	3.2	4.26	4.97	9.14	65.32	13.63	67.75	124.60	890.44	
170		2E	536.6	539.8	3.2	4.24	5.50	9.77	78.07	13.57	74.62	132.56	1059.25	
171		2D	539.8	541.9	2.1	2.99	4.51	5.41	89.58	6.28	28.32	33.97	562.47	
172														
173		2BG	530.5	543.7	11.4	3.28	4.22	8.01	52.88	45.2	227.0	370.2	3442.8	
174														
175	82F-11	2A	500.8	505.0	4.2	3.19	3.11	7.43	25.51	13.40	41.67	99.55	341.78	

	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA
1	ROCK	HOLE NO	LENGTH	S.G	PB	ZN	SILVER	AREA(SQFT)	TONNES		S*W	T*W	U*W
2	-----	-----	-----	-----	-----	-----	-----	-----	-----		-----	-----	-----
3	2A ✓	66-05	5.0	3.09	1.28	4.00	22.10	37665	16478		21092	65914	364174
4	✓	71-03	5.0	3.19	2.40	2.70		58281	26323		63176	71073	0
5	<i>not used</i>	82F-11	4.2	3.19	3.11	7.43	25.51		0		0	0	0
6	✓	82F-15	2.8	2.28	2.03	5.78	28.93	84166	15215		30887	87944	440178
7		-----	-----	-----	-----	-----	-----	-----	-----		-----	-----	-----
8	SUM 2A				1.98	3.88	13.86		58017		115155	224931	804353
9	-----	-----	-----	-----	-----	-----	-----	-----	-----		-----	-----	-----
10	2H ✓	70-12	.5	4.60	4.70	6.20	70.00	34875	2271		10676	14083	158998
11	✓	71-01	1.0	3.79	2.93	6.24	58.40	53391	5730		16789	35755	334634
12	<i>not used</i>	75-11	5.0	3.87	3.60	6.29	33.60		0		0	0	0
13	✓	75456-15	1.5	4.02	6.11	9.46	91.90	63086	10772		65818	101904	989957
14	<i>not used</i>	76-09	6.0	4.43	5.03	5.83	69.18		0		0	0	0
15	✓	76-10	7.8	4.46	4.54	7.65	42.50	5425	5344		24263	40883	227127
16	<i>not used</i>	77-16	4.0	4.31	6.81	8.35	99.70		0		0	0	0
17	✓	82F-10	1.8	4.08	5.85	8.51	110.11	38595	8026		46954	68304	883774
18	<i>not used</i>	82F-11	4.5	4.12	4.89	5.87	90.20		0		0	0	0
19	✓	82F-14	4.6	4.27	6.46	8.28	104.82	45415	25260		163180	209154	2647767
20	✓	82F-15	.9	4.22	4.99	6.26	97.04	84166	9052		45169	56665	878401
21	✓	83F-02	2.1	4.20	5.32	8.12	88.33	88661	22144		117805	179808	1955960
22	✓	83F-12	2.0	3.89	5.12	8.79	82.11	90056	19840		101581	174394	1629067
23	✓	83F-19	12.8	3.74	5.04	10.05	78.75	114701	155525		783994	1563706	12248293
24		-----	-----	-----	-----	-----	-----	-----	-----		-----	-----	-----
25	SUM 2H				5.21	9.26	83.17		263965		1376228	2444655	21953979
26	-----	-----	-----	-----	-----	-----	-----	-----	-----		-----	-----	-----
27	2BG ✓	66-05	5.0	5.00	(5.00)	(5.00)	(5.00)	37665	26664		133321	133321	133321
28	✓	70-12	32.0	4.83	6.35	8.98	59.29	34875	152625		968860	1370074	9049130
29	✓	70-13	10.0	4.08	5.10	7.97	57.22	72541	83707		426760	667460	4789683
30		70-17	82.0	1.11	5.23	7.17	0.0		0		0	0	0
31	✓	71-02	14.0	4.03	4.06	7.07	0.0	72851	116288		471885	822617	0
32	✓	71-03	5.0	4.33	4.50	5.80	0.0	58281	35730		160786	207235	0
33	✓	71-04	10.0	4.33	3.55	5.70	0.0	17205	21096		74890	120245	0
34	✓	71-05	10.0	4.33	5.45	5.78	77.99	39060	47893		260941	276818	3735068
35	✓	72004	17.1	2.93	2.79	6.66	47.80	93156	132331		368979	880875	6325253

FARO UNDERGROUND 9% CUTOFF

SUMMARY OF GEOLOGIC RESERVES

	TONNES	LEAD (%)	LEAD (%)	LEAD PLUS ZINC	SILVER (g/t)	PERCENT OF TOTAL RESERVE
WEST ZONE						
A TYPE	42,801	1.97	3.20	5.17	8.5	7.4%
BG TYPE	520,083	4.92	7.82	12.74	53.1	90.2%
H TYPE	13,417	4.68	7.61	12.29	54.6	2.3%
TOTAL	576,301	4.70	7.47	12.17	49.8	
EAST ZONE						
A TYPE	15,215	2.03	5.78	7.81	28.9	0.7%
BG TYPE	1,787,645	5.10	7.51	12.61	71.6	87.1%
H TYPE	250,619	5.28	9.39	14.67	85.0	12.2%
TOTAL	2,053,479	5.10	7.73	12.83	72.9	
BOTH ZONES						
A TYPE	58,016	1.99	3.88	5.86	13.9	2.2%
BG TYPE	2,307,728	5.06	7.58	12.64	67.4	87.8%
H TYPE	264,036	5.25	9.30	14.55	83.5	10.0%
TOTAL	2,629,780	5.01	7.67	12.68	67.8	

NOTE:

WITH A 100 FOOT RATHER THAN 50 CROWN PILLAR
AND FOLLOWING A 10 FOOT MINIMUM WIDTH THRUOUT

WEST ZONE	453,742	4.35	7.24	11.59	40.0
EAST ZONE	2,015,303	5.11	7.75	12.86	73.3
BOTH ZONES	2,469,045	4.97	7.66	12.63	67.2

DILUTED GEOLOGIC RESERVES:

DILUTED BY THE FOLLOWING:

PERCENT DILUTION: 25 %
LEAD IN DILUTANT: 1.60 %
ZINC IN DILUTANT: 2.40 %
SILVER IN DILUTANT: 25 (g/t)

WEST ZONE	720,376	3.76	5.98	9.74	39.88
EAST ZONE	2,566,849	4.08	6.19	10.27	58.37
BOTH ZONES	3,287,225	4.01	6.14	10.15	54.32

SAME DILUTION APPLIED TO THE RESERVES WITH CROWN PILLAR REDUCTION:

WEST ZONE	567,178	3.48	5.80	9.28	32.05
EAST ZONE	2,519,129	4.09	6.20	10.30	58.72
BOTH ZONES	3,086,306	3.98	6.13	10.11	53.82

CURRAGH RESOURCES
FARO UNDERGROUND

AVERAGES FOR ORE TYPES

POLYGON	ORE TYPE	ORE TONNES	SG	LEAD (%)	ZINC (%)	SILVER (g/t)	T*PB	T*ZN	T*AG	ORE TYPE=				
										T	A T*PB	T*ZN	T*AG	
EAST ZONE *****														
B3F02	H	22,144	4.20	5.32	8.12	88.33	117806	179809	1955980	0	0	0	0	
	BG	336,264	4.16	4.69	5.94	73.67	1577078	1997408	24772569	0	0	0	0	
4567515	H	10,772	4.02	6.11	9.46	91.90	65817	101903	989947	0	0	0	0	
	BG	142,792	4.33	4.85	7.77	52.64	692541	1109494	7516571	0	0	0	0	
B3F12	H	19,840	3.89	5.12	8.79	82.11	101581	174394	1629062	0	0	0	0	
	BG	141,573	4.08	4.59	8.42	70.17	649820	1192045	9934177	0	0	0	0	
B3F19	H	155,525	3.74	5.04	10.05	78.75	783846	1563026	12247594	0	0	0	0	
	BG	191,565	3.53	6.78	12.12	92.67	1298811	2321768	17752329	0	0	0	0	
B2F16	BG	118,508	4.23	5.86	7.86	89.17	694457	931473	10567358	0	0	0	0	
B2F15	A	15,215	2.28	2.03	5.78	28.93	30886	87943	440170	15215	30886	87943	440170	
	H	9,052	4.22	4.99	6.26	97.04	45169	56666	878406	0	0	0	0	
	BG	99,405	3.79	3.81	5.58	54.20	378733	554680	5387751	0	0	0	0	
B2F12	BG	95,812	3.05	3.29	5.33	44.13	315221	510678	4228184	0	0	0	0	
7013	BG	83,707	4.08	5.10	7.97	57.22	426906	667145	4789715	0	0	0	0	
B2F14	H	25,260	4.27	6.46	8.28	107.82	163180	209153	2723533	0	0	0	0	
	BG	148,263	4.40	5.02	7.26	73.66	744280	1076389	10921053	0	0	0	0	
B3F15	BG	131,225	4.08	4.52	7.82	74.95	593137	1026180	9835314	0	0	0	0	
7105	BG	47,893	4.33	5.45	5.78	77.99	261017	276822	3735175	0	0	0	0	
7213	BG	188,676	3.93	6.60	6.97	86.67	1245262	1315072	16352549	0	0	0	0	
B2F10	H	8,026	4.08	5.85	8.51	110.11	46952	68301	883743	0	0	0	0	
	BG	40,866	3.28	4.22	8.01	52.88	172455	327337	2160994	0	0	0	0	
7104	BG	21,096	4.33	3.55	5.70	0.00	74891	120247	0	0	0	0	0	
TOTAL		2,053,479		5.10	7.73	72.90	10479846	15867931	149702172	TOTAL	15215	30886	87943	440170
										AVERAGE	2.03	5.78	28.93	

WEST ZONE

6605	A	16,478	3.09	1.28	4.00	22.10	21092	65912	364164	16478	21092	65912	364164	
	BG	21,704	4.07	5.20	9.11	65.20	112861	197723	1415101	0	0	0	0	
72004	BG	132,331	2.93	2.79	6.66	47.80	369203	881324	6325422	0	0	0	0	
7102	BG	116,288	4.03	4.06	7.07	0.00	472129	822156	0	0	0	0	0	
7611	BG	61,080	3.79	7.72	9.61	176.43	471538	586979	10776344	0	0	0	0	
7103	A	26,323	3.19	2.40	2.70	0.00	63175	71072	0	26323	63175	71072	0	
	BG	35,370	4.33	4.50	5.80	0.00	159165	205146	0	0	0	0	0	
7610	H	5,416	4.52	6.52	9.65	43.99	35312	52264	238250	0	0	0	0	
	BG	685	4.46	4.54	7.65	42.50	3110	5240	29113	0	0	0	0	
7012	H	2,271	4.60	4.70	6.20	70.00	10674	14080	158970	0	0	0	0	
	BG	152,625	4.83	6.35	8.98	59.29	969169	1370573	9049136	0	0	0	0	
7101	H	5,730	3.79	2.93	6.24	58.40	16789	35755	334632	0	0	0	0	
TOTAL		576,301		4.69	7.48	49.78	2704217	4308226	28691131	TOTAL	42801	84267	136984	364164
										AVERAGE	1.97	3.20	8.51	

BOTH ZONES

DRE TONNES	SG	LEAD (%)	ZINC (%)	SILVER (g/t)	DRE TYPE=A TONNES	LEAD (%)	ZINC (%)	SILVER (g/t)
2,629,780		5.01	7.67	67.84	58,016	1.98	3.88	13.86

CURRAGH RESOURCES
FARO UNDERGROUND

WITH A 100 RATHER THAN 50 FOOT CROWN PILLAR

POLYGDON	ORE TYPE	ORE TONNES	SG	LEAD (%)	ZINC (%)	SILVER (g/t)
EAST ZONE *****						
83F02	H	22,144	4.20	5.32	8.12	88.33
	BG	336,264	4.16	4.69	5.94	73.67
4567515	H	10,772	4.02	6.11	9.46	91.90
	BG	142,792	4.33	4.85	7.77	52.64
83F12	H	19,840	3.89	5.12	8.79	82.11
	BG	141,573	4.08	4.59	8.42	70.17
83F19	H	155,525	3.74	5.04	10.05	78.75
	BG	191,565	3.53	6.78	12.12	92.67
82F16	BG	118,508	4.23	5.86	7.86	89.17
82F15	A	15,215	2.28	2.03	5.78	28.93
	H	9,052	4.22	4.99	6.26	97.04
	BG	99,405	3.79	3.81	5.58	54.20
82F12	BG	95,812	3.05	3.29	5.33	44.13
7013	BG	75,336 *	4.08	5.10	7.97	57.22
82F14	H	25,260	4.27	6.46	8.28	107.82
	BG	148,263	4.40	5.02	7.26	73.66
83F15	BG	131,225	4.08	4.52	7.82	74.95
7105	BG	33,525 *	4.33	5.45	5.78	77.99
7213	BG	188,676	3.93	6.60	6.97	86.67
82F10	H	7,223 *	4.08	5.85	8.51	110.11
	BG	36,779	3.28	4.22	8.01	52.88
7104	BG	10,548 *	4.33	3.55	5.70	0.00
TOTAL		2,015,303		5.11	7.75	73.34

WEST ZONE

6605	A	9,887 *	3.09	1.28	4.00	22.10
	BG	13,022 *	4.07	5.20	9.11	65.20
72004	BG	132,331	2.93	2.79	6.66	47.80
7102	BG	116,288	4.03	4.06	7.07	0.00
7611	BG	24,432 *	3.79	7.72	9.61	176.43
7103	A	21,058 *	3.19	2.40	2.70	0.00
	BG	28,296 *	4.33	4.50	5.80	0.00
7610	H	0 **	4.52	6.52	9.65	43.99
	BG	0 **	4.46	4.54	7.65	42.50
7012	H	1,590 *	4.60	4.70	6.20	70.00
	BG	106,838 *	4.83	6.35	8.98	59.29
7101	H	0 **	3.79	2.93	6.24	58.40
TOTAL		453,742		4.35	7.24	40.00

* CROWN PILLAR REDUCTION

**LESS THAN 10 FEET THICK

BOTH ZONES

ORE TONNES	SG	LEAD (%)	ZINC (%)	SILVER (g/t)
2,469,045		4.97	7.66	67.21

COMPOSITING OF 83F-15

L	PB	ZN	SG	L*SG*PB	L*SG*ZN	L*SG	AG	L*SG*AG
2.1	4.34	12.32	4.33	39.46	112.03	9.093	59.41	540.2151
5.8	4.55	7.50	4.28	112.95	186.18	24.824	74.65	1853.111
1.7	4.78	5.08	3.72	30.23	32.13	6.324	67.5	426.87
4.2	4.49	6.85	3.84	72.41	110.48	16.128	87.1	1404.748
13.80	4.52	7.82	4.08	255.06	440.81	56.37	74.95	4224.95

TONNAGE FOR 83F-15

A	L	SG	mA	mL	mV	mT
82,306	13.8	4.08	7,646	4.21	32,163	131,225

COMPOSITING OF 66-05

L	PB	ZN	SG	L*SG*PB	L*SG*ZN	L*SG	AG	L*SG*AG
5	1.28	4.00	3.09	19.78	61.80	15.45	22.1	341.445
5	5.20	9.11	4.07	105.82	185.39	20.35	65.2	1326.82
10.00	3.51	6.90	3.58	125.60	247.19	35.80	46.60	1668.27

TONNAGE FOR 66-05

A	L	SG	mA	mL	mV	mT
37,665	5.0	3.09	3,499	1.52	5,333	16,478
37,665	5.0	4.07	3,499	1.52	5,333	21,704

COMPOSITING OF 76-10

L	PB	ZN	SG	L*SG*PB	L*SG*ZN	L*SG	AG	L*SG*AG
1.3	6.63	9.25	4.57	39.39	54.95	5.941	94.6	562.0186
0.8	3.80	5.88	4.29	13.04	20.18	3.432	23.3	79.9656
2.7	8.50	12.40	4.59	105.34	153.67	12.393	36	446.148
3	5.34	8.25	4.50	72.09	111.38	13.5	34.3	463.05
7.80	6.52	9.65	4.52	229.86	340.18	35.27	43.99	1551.18

TONNAGE FOR 76-10

A	L	SG	mA	mL	mV	mT
5,425	7.8	4.52	504	2.38	1,198	5,416
5,425	1.0	4.46	504	0.30	154	685

N	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0

TOTAL	576,301	152,178	3.79	4.69	7.48	49.78	2704217	4308226	28691131	TOTAL	42801	84267	136984	364164
										AVERAGE	1.97	3.20		8.51

 BOTH ZONES

ORE TONNES	ORE VOLUME	SG	LEAD (%)	ZINC (%)	SILVER (g/t)	ORE TYPE=A TONNES	LEAD (%)	ZINC (%)	SILVER (g/t)
2,629,780	674,728	3.90	5.01	7.67	67.84	58,016	1.98	3.88	13.86

 COMPOSITING OF 83F-15

L	PB	ZN	SG	L*SG*PB	L*SG*ZN	L*SG	AG	L*SG*AG
2.1	4.34	12.32	4.33	39.46	112.03	9.093	59.41	540.2151
5.8	4.55	7.50	4.28	112.95	186.18	24.824	74.65	1853.111
1.7	4.78	5.08	3.72	30.23	32.13	6.324	67.5	426.87
4.2	4.49	6.85	3.84	72.41	110.48	16.128	87.1	1404.748
13.80	4.52	7.82	4.08	255.06	440.81	56.37	74.95	4224.95

TONNAGE FOR 83F-15

A	L	SG	mA	mL	mV	mT
82,306	13.8	4.08	7,646	4.21	32,163	131,225

 COMPOSITING OF 66-05

L	PB	ZN	SG	L*SG*PB	L*SG*ZN	L*SG	AG	L*SG*AG
5	1.28	4.00	3.09	19.78	61.80	15.45	22.1	341.445
5	5.20	9.11	4.07	105.82	185.39	20.35	65.2	1326.82
10.00	3.51	6.90	3.58	125.60	247.19	35.80	46.60	1668.27

TONNAGE FOR 66-05

A	L	SG	mA	mL	mV	mT
37,665	5.0	3.09	3,499	1.52	5,333	16,478
37,665	5.0	4.07	3,499	1.52	5,333	21,704

 COMPOSITING OF 76-10

L	PB	ZN	SG	L*SG*PB	L*SG*ZN	L*SG	AG	L*SG*AG
---	----	----	----	---------	---------	------	----	---------

1.3	6.63	9.25	4.57	39.39	54.95	5.941	94.6	562.0186
0.8	3.80	5.88	4.29	13.04	20.18	3.432	23.3	79.9856
2.7	8.50	12.40	4.59	105.34	153.67	12.393	36	446.148
3	5.34	8.25	4.50	72.09	111.38	13.5	34.3	463.05
7.80	6.52	9.65	4.52	229.86	340.18	35.27	43.99	1551.18

TONNAGE FOR 76-10

A	L	SB	MA	ML	AV	MT
5,425	7.8	4.52	504	2.38	1,198	5,416
5,425	1.0	4.46	504	0.30	154	685



DWG. NO.		REFERENCE DRAWINGS		CLIENT		PROJECT		TITLE		S.O.M. No.	
				CURRAGH RESOURCES		FARO AREA DEPOSITS		FARO DEPOSIT		3509 19	
				LOCATION, FARO, YUKON		FARO DEPOSIT		OPEN PIT PLAN		DRAWING NUMBER	
				KILBORN		END OF 1992 - ULTIMATE		FIG. 5,6,5-7		REV. A	
				SECTION MINING		DATE		DATE		DATE	
				SCALE 1" = 100'		DESIGNED BY J.B.F. FEB 87		DRAWN BY Z.A. FEB 87		CHECKED BY J.E.F.	
				APPROVED BY J.E.F.							
				A ISSUED FOR TECHNICAL REVIEW FEB. 87 Z.A.							
				REVISIONS		REVISIONS		REVISIONS		REVISIONS	



DWG. NO.	REFERENCE DRAWINGS
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CLIENT	NO.	DESCRIPTION
PROJ.		REVISIONS
CHECK		

CLIENT	NO.	DESCRIPTION
PROJ.		REVISIONS
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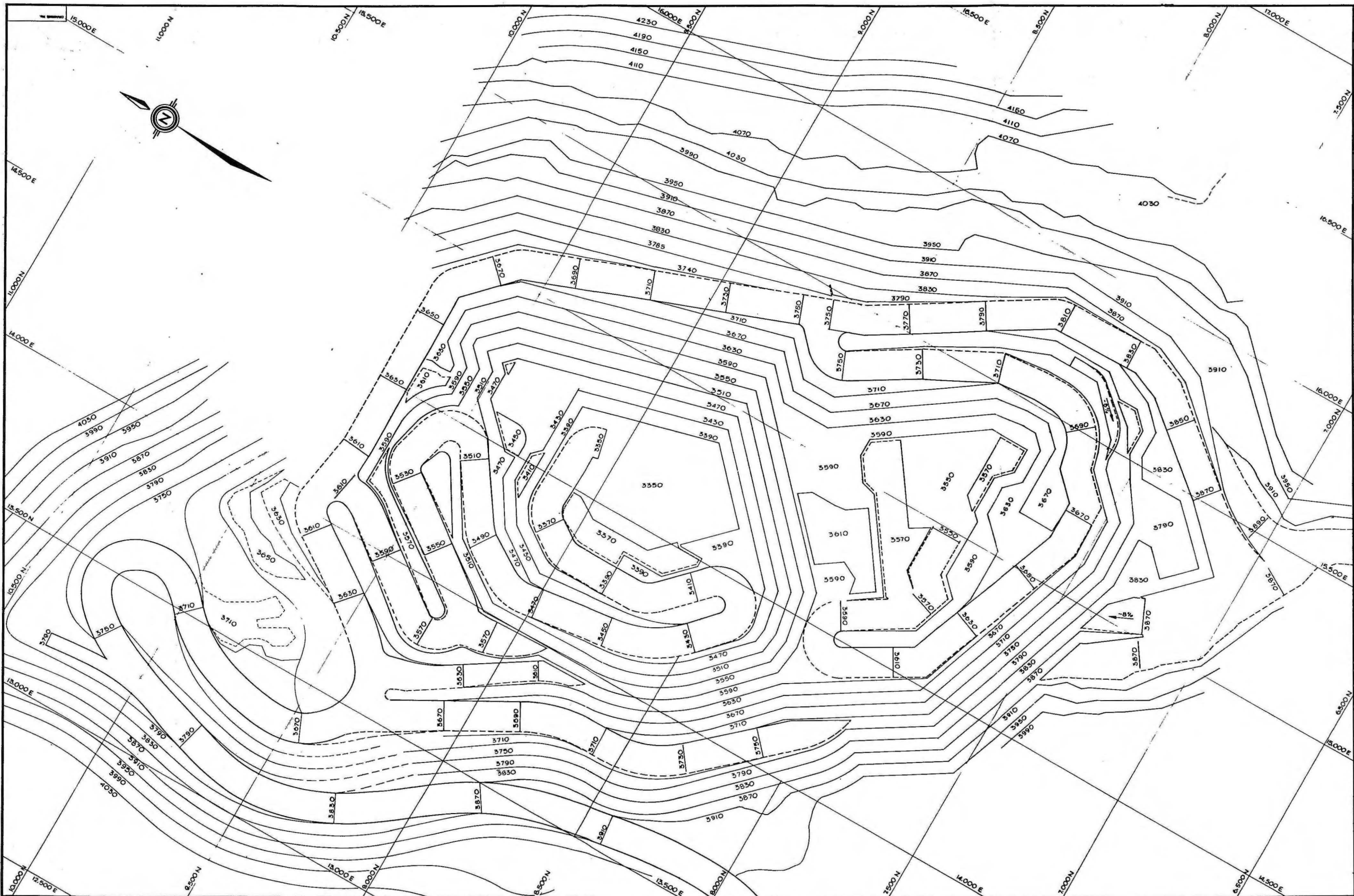
CLIENT	NO.	DESCRIPTION
PROJ.		REVISIONS
CHECK		

SECTION: MINING	DATE
SCALE: 1" = 100'	MAR 87
DRAWN BY: J.B.F.	MAR 87
CHECKED BY: Z.A.	MAR 87
APPROVED BY: [Signature]	

CLIENT: CURRAGH RESOURCES
 LOCATION: FARO, YUKON
KILBORN

TITLE: FARO AREA DEPOSITS
 FARO DEPOSIT
 OPEN PIT PLAN
 END OF 1989

PROJECT No.	DIVISION No.
3509	19
DRAWING NUMBER	REV.
FIG. 5.6.5-4	A



DIV. NO.		REFERENCE DRAWINGS		CLIENT		PROJECT NO.		DIVISION NO.		DRAWING NUMBER		REV.	
				CURRAGH RESOURCES		3509		19		FIG. 5.0.5 - 3		A	
				FARO, YUKON									
				KILBORN									
				FARO DEPOSIT									
				OPEN PIT PLAN									
				END OF 1988									

PROJECT: MINING
 SCALE: 1" = 100'
 DATE: MAR. 87
 DESIGNED BY: J.B.F.
 DRAWN BY: Z.A.
 CHECKED BY: J.B.F.
 APPROVED BY: J.B.F.

A ISSUED FOR TECHNICAL REVIEW MAR. 87 Z.A.

NO.	DESCRIPTION	DATE	BY	CHECKED